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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/663,841

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Yoshisada Nakamura

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EXAMINER

NAKARANI, DHIRAJLAL S

ART UNIT

PAPER NUMBER

1773

DATE MAILED: 11/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/663,841

Applicant(s)

NAKAMURA ET AL.

Examiner

D. S. Nakarani

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-7 and 10-25 is/are pending in the application.
4a) Of the above claim(s) 10-25 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1,2 and 4-7 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 09/20/2006.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 10-25 stand withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions, there being no allowable generic or linking claim.

Election was made **without** traverse in the reply filed on July 26, 2005.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 2 and 4-7 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6,720,064 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because the U. S. Patent No. 6,720,064 B2 claims an image-receiving sheet for electrophotography comprising support and a toner-receiving layer made of polyester resin. As per Example 1 the support paper coated both side with polyethylene comprising a mixture of 70 wt% high density polyethylene having density of 0.950 and melt index of 8g/10 min. and 30 wt% low density polyethylene having density of 0.923 and melt index of 7 g/10 min. and toner receiving layer made of polyester resin such as TUFTONE U-5 which is disclosed in the present invention at page 27, line 14 (Example 1, Tables 1 and 2). The polyester resins of U. S. Patent No. 6,720,064 B2 are the same as the polyester resins disclosed in the present disclosure (Compare Col. 6, lines 4-17 of U. S. Patent No. 6,720,064 B2 with page 27, lines 7-17 of the present disclosure). Since polyester resins are the same all other properties specifically not disclosed are inherently there.

Therefore it would have been obvious at the time of this invention made to use the support and the polyester resins disclosed in the U. S. Patent No. 6,720,064 B2 to make the image-receiving sheet for electrophotography.

4. Claims 1, 2 and 4-7 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 7 and 8 of U.S. Patent No. 6,936,395 B2.

Although the conflicting claims are not identical, they are not patentably distinct from each other because The U.S. Patent No. 6,936,395 B2 claims the support coated with the toner image-receiving layer made of polyester resin having claimed properties (claim 7). The U.S. Patent No. 6,936,395 B2 discloses support comprising support paper coated both side with polyethylene comprising a mixture of 70 wt% high density polyethylene having density of 0.950 and melt index of 8g/10 min. and 30 wt% low density polyethylene having density of 0.923 and melt index of 7 g/10 min. Thus polyethylene resin layer comprises at least one polyethylene having density of less than 0.935. The disclosed polyethylene resin layer deemed to meet claimed melt index since both polyethylenes have melt index less than 10 g/10 min. Therefore it would have been obvious to a person of ordinary skill in the art at the time of this invention made to utilize support disclosed in the U.S. Patent No. 6,936,395 B2.

5. Claims 1, 2 and 4-7 are rejected under 35 U.S.C. 102(f) because the applicant did not invent the claimed subject matter. Goto (U. S. Patent 6,720,064 B2) discloses an image-receiving sheet for electrophotography comprising support paper coated both side with polyethylene comprising a mixture of 70 wt% high density polyethylene having density of 0.950

Art Unit: 1773

and melt index of 8g/10 min. and 30 wt% low density polyethylene having density of 0.923 and melt index of 7 g/10 min. and toner receiving layer made of polyester resin such as TUFTONE U-5 which is disclosed in the present invention at page 27, line 14 (Example 1, Tables 1 and 2). Goto's polyester resins are the same as polyester resins disclosed in the present disclosure (Compare Col. 6, lines 4-17 of Goto with page 27, lines 7-17 of the present disclosure). Since polyester resins are the same all other properties specifically not disclosed are inherently there.

6. Claims 1, 2 and 4-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Goto (U. S. Patent 6,720,064 B2).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Goto (U. S. Patent 6,720,064 B2) discloses an image-receiving sheet for electrophotography comprising support paper coated both side with polyethylene comprising a mixture of 70 wt% high density polyethylene having density of 0.950 and melt index of 8g/10 min. and 30 wt% low density polyethylene having density of 0.923 and melt index of 7 g/10 min. and toner receiving layer made of polyester resin such as TUFTONE U-5 which is disclosed in the present invention at page 27, line 14 (Example 1, Tables 1 and 2). Goto's polyester resins are the same as polyester resins disclosed in the present disclosure (Compare Col. 6, lines 4-17 of Goto with page 27, lines

7-17 of the present disclosure). Since polyester resins are the same all other properties specifically not disclosed are inherently there.

7. Claims 1, 2 and 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashida et al (U. S. Patent 5,824,462) in view of Ogino et al (U. S. Patent Application Publication 2002/0037176 A10) Takehana et al (U. S. Patent 5,885,698) and Ikeuchi et al ((U. S. Patent 6,444,383 B2).

Ashida et al disclose a resin coated paper comprising a paper coated on side (the reverse side) with a first resin layer comprising a mixture of high density polyethylene (HDPE) and low density polyethylene (LDPE) and another side (the obverse side on which an image-forming layer (i.e. image receiving layer) with second resin layer comprising a mixture of titanium dioxide (10 wt%), LDPE (9.5 wt%, density=0.920 g/cm³, MFR=8.5 g/10 min.), LDPE (65 wt%, density=0.920 g/cm³, MFR=4.5 g/10 min.) and HDPE (15 wt%, density=0.970 g/cm³, MFR=7.0 g/10 min.) (Example 19, col. 27, line 58 to col. 28, line 21). Ashida et al disclose that the resin coated paper is useful as the support for photocopying print paper (i.e. electro photographic paper) (Col. 13, line 46). Ashida et al disclose image receiving layer can be made of polyester resins, poly(vinyl acetate) resins etc. (Col. 14, lines 21-37). These resins are deemed to be thermoplastic resins unless shown otherwise. The polyethylenes of the second layer have at least one polyethylene having density of 0.920 g/cm³. The mixture of polyethylenes recited above for the second resin layer when melt compounded would result in polyethylene compounded product having density of 0.928 g/cm³ and melt flow rate between 4.5 and 8.5 g/10 min. Ashida et al forms support by melt extrusion coating (Col. 28, line 14). Ashida et al's second resin layer

Art Unit: 1773

comprises two polyethylene having different densities and the amount of polyethylenes is 89.5 wt%. Ashida et al fail to disclose claimed properties of toner image receiving layer forming polyester resin.

Ogino et al disclose an electro photographic transfer sheet comprising paper support (40) coated both side of the paper support (40) polyethylene coating layers (41) and an image receiving layer (43) formed of a thermoplastic polyester resin (Paragraph 0050). The thermoplastic polyester resin has glass transition temperature 30°C or less, weight average molecular weight of 15,400 and number average molecular weight of 6,600 thus $M_w/M_n = 2.33$ (Paragraph 0122). The polyester resin is an aqueous dispersion (paragraph 0101). Ogino et al disclose a polyester resin mixture comprising 50 parts of the polyester resin, NE382-1 produced by Kao Corp and 50 parts of the polyester resin GK130 produced by Toyobo Co.,Ltd. for the image receiving layer (43) (See paragraph 0124). The polyester resin NE382-1 deemed to be equivalent to Tuftone NE-382 disclosed at page 27 lines 13-14 of present disclosure and the polyester resin GK130 deemed to be equivalent to Vylon GK-130 disclosed at page 27, line 13 of present disclosure unless shown otherwise. Therefore the polyester mixture of Ogino et al deemed to meet claimed properties unless shown otherwise.

Takehana et al disclose an electro photographic image receiving film having image receiving layer made of water dispersible polyester having glass transition temperature 35°C or higher (col. 5, lines 18-24), a number average molecular weight of from 1500 to 5000 and M_w/M_n of from 1.2 to 3.0 (col. 6, lines 25-30).

Ikeuchi et al disclose an image receiving sheet having polyester image receiving layer. The polyester has number average molecular weight ranging from 1500 to 7000. Ikeuchi et al

disclose that when number average molecular weight is low, the resin is too soft and has excessive blocking and when the molecular weight is high, the resin is too hard and decreases compatibility with toner (col. 7, lines 11-55). Ikeuchi et al's polyester resin has glass transition temperature 53⁰ C or higher (Examples).

Therefore it would have been obvious to a person of ordinary skill in the art at the time of this invention made to utilize of disclosures of Ogino et al, Takehana et al and Ikeuchi et al in the invention of Ashida et al et al to use polyester resin of Ogino et al, Takehana et al or Ikeuchi et al for image receiving layer depending on toner compatibility and desired cohesive energy for toner.

8. Receipt of Information Disclosure Statement filed September 20, 2006 is acknowledged. All recited Japanese patent documents have been considered to the extent of provided their abstract in English and have been made of record. Recited both non-English, Japanese Office Action on JP 2002-272201 dated June 20, 2006 and Japanese Office Action on JP 2002-283299 dated June 20, 2006, have been crossed-out. If applicants are desirous to make these documents of record, either their concise relevance in English to this application or their English translation with PTOL 1449 should be provided to this Office for consideration.

9. Applicant's arguments filed September 15, 2006 have been fully considered but they are not persuasive. In reference to rejection of claims 1, 2 and 4-7 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6,720,064 B2 to Goto, applicants mainly argue that Goto's claims 1-6 fail to recite that the image

receiving sheet thereof includes a support. Example 1 as disclosed in the Goto's specification is relied upon that the image receiving sheet disclosed in claims 1-6 includes a support. However, it is incorrect to rely on the teachings in the specification of Goto to support a double patenting rejection, as Goto is not considered prior art.

These arguments are unpersuasive because Goto claims an image-receiving sheet which comprises a toner image receiving layer. Therefore claimed sheet deemed to have a support and Goto's Example 1 disclose claimed support and polyester resin such as TUFTONE U-5, which is disclosed in the present disclosure at page 27, line 14. There is nothing on record showing that the TUFTONE U-5 does not meet claimed properties of polyester resin.

In reference to rejection of claims 1, 2 and 4-7 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6,936,395 to Goto et al, applicants similarly argue that Goto et al fail to recite that the support thereof includes a polyethylene resin having the claimed MFR. Furthermore, Table 1 of Goto et al is relied upon the contention that the image receiving sheet disclosed in claims 1, 7, and 8 of Goto et al has a support containing polyethylene. However, Goto et al is not a prior art, therefore Table 1 is an incorrect basis to support a double patenting rejection.

These arguments are unpersuasive because the specification can be used as a dictionary for generically claimed support sheet and the Table 1 clearly shows claimed support.

In reference to rejections of claims 1, 2 and 4-7 under 35 U.S.C. 102(f) because the applicant did not invent the claimed subject matter and under 35 U.S.C. 102(e) as being anticipated by Goto (U. S. Patent 6,720,064 B2), applicants mainly points to Examples 2 and 4 of Goto showing that a water dispersible polyester resin KZA-7049 (Unitika) does not meet

Art Unit: 1773

claimed properties (1) to (4) of a self-dispersing water-dispersible polyester resin emulsion as support points comparative Example 2 of instant disclosure.

These arguments are unpersuasive because Goto clearly show in Example 1 use of polyester resin TUFTONE U-5, which is also disclosed in the present disclosure at page 27, line 14 as usable claimed thermoplastic polyester resin. There is nothing on record showing otherwise. Rejections are not based on Examples 2 and 4 of Goto as argued.

In reference to rejection of claims 1, 2 and 4-7 under 35 U.S.C. 103(a) as being unpatentable over Ashida et al (U. S. Patent 5,824,462) in view of Ogino et al (U. S. Patent Application Publication 2002/0037176 A10) Takehana et al (U. S. Patent 5,885,698) and Ikeuchi et al ((U. S. Patent 6,444,383 B2)), applicants mainly argue that Ashida et al fail to disclose claimed polyester resin. Ogino et al disclose a polyester resin having glass transition temperature of about 30⁰ C or less which is outside the claimed glass transition temperature range. Both, Takehana et al and Ikeuchi et al, fails to disclose claimed volume average particle diameter of polyester resin.

These arguments are unpersuasive because the final image receiving layer does not have polyester resin in the particulate form. There is no criticality established for the claimed for the claimed volume average particle diameter of polyester resin. Furthermore both, Takehana et al and Ikeuchi et al, are used to show importance of glass transition temperature for compatibility with toner and the prevention of blocking. Therefore it is obvious to a person of ordinary skill in the art at the time of this invention made to use polyester resin depending on toner compatibility and desired cohesive energy for toner.


10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. S. Nakarani whose telephone number is (571) 272-1512. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


D. S. Nakarani
Primary Examiner
Art Unit 1773

DSN
November 26, 2006.